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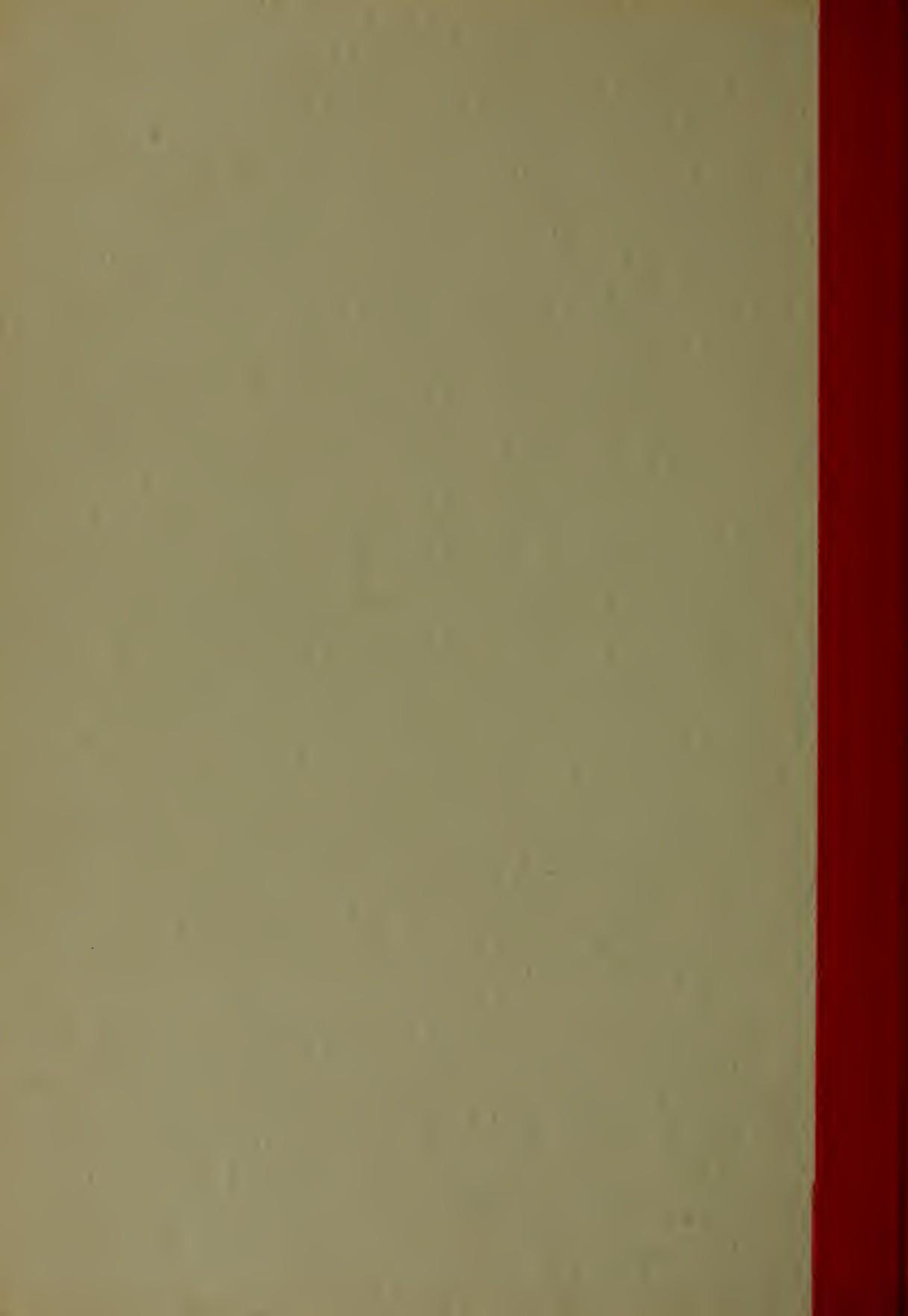
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# University of Texas Bulletin

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## VISUAL INSTRUCTION THROUGH LANTERN SLIDES AND MOTION PICTURE FILMS

By

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The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that free-men desire.

Mirabeau B. Lamar

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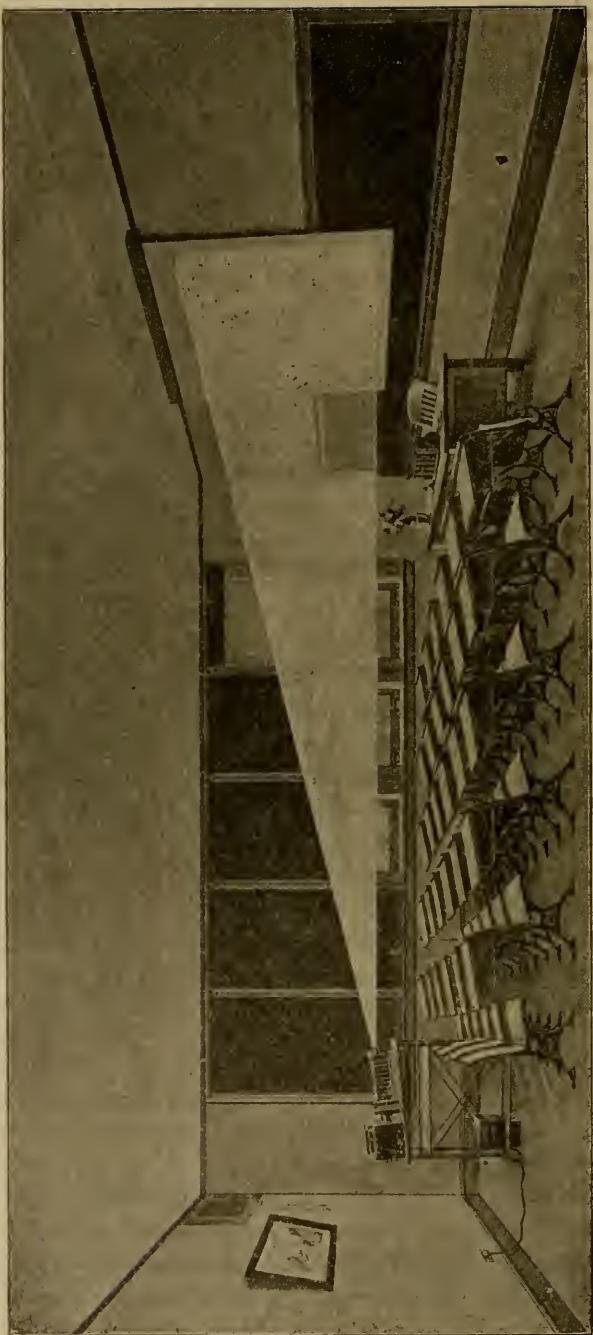
## Visual Instruction Through Lantern Slides and Motion Picture Films

### Introduction

Psychologists tell us that eighty-five percent of our thinking comes from a visual stimulus. How many times have you heard this question in the schoolroom: "Don't you SEE what I mean?" Why does the teacher make this appeal time after time in almost every recitation, whether it be mathematics, history, or English? She hasn't stopped to analyze. She knows that in her own mind her thinking is a question of seeing and that she understands when she sees, and that, after all, thinking can be for the most part transformed into the pictorial element and that after she can get the student to see in terms of the pictorial then her purpose becomes suddenly accomplished.

Visual instruction is, therefore, not a new method of teaching, but merely an attempt to emphasize and to clarify the proper use of the visual element in thought. It seems strange that a matter so vital and potent should have had so little attention from educators. It seems that we have been remarkably slow to realize that good teaching, because of some of the principles referred to above, must depend upon the visual appeal. Particularly can visual equipment be used in connection with the sciences, where diagrams and illustrations are so essential. Notwithstanding the seeming self-evident and overwhelming importance of the eye as an educational factor, education has been based upon the auditory sense and we have considered the eye as a subsidiary factor. For instance, how many schoolrooms are equipped with maps and pictures and charts and stereopticons and motion picture machines? What is the chief function of the blackboard in most schoolrooms? Unfortunately, not to help visualize, but as a cheap surface upon which to do problems, write descriptions, or explanations.

Perhaps the most forceful example of the effectiveness of the visual in education came to us during the world war. That was a time when we were willing to cast aside any habits or customs, provided a better way to accomplish a purpose quickly and effec-



TYPICAL SCHOOLROOM WITH LANTERN EQUIPMENT

tively was found. Our army training was begun on the basis of our usual and old-fashioned educational policies. Fortunately, however, there were a few men who could see further, who could analyze more clearly, and who were willing to follow the rational conclusions forced upon them by evidence. As a consequence, the visual method of teaching was introduced into the army at a number of places and as a result, courses of training in various fields, from the prosaic marching drill to the most technical engineering work, were taught by the aid of pictures, still and motion; and, much to the surprise of even those who were responsible for the change in method, courses that had been taking months for the average student to complete, were now finished in a few weeks with much better averages. This was because the simple law of our thought life was being followed, that is, the method of approach goes through the visual rather than through the auditory. In other words, students SAW at once because the thing came to them through their eyes rather than through the indefinite terms of a lecturer.

To assist schools and communities in promoting the visual method in education, the Visual Instruction Division of the University Department of Extension serves as a loan bureau for lantern slides and motion picture films. Since the overhead expenses for such service are relatively large, we ask the cooperation of those served, by the payment of moderate fees, to help cover the upkeep and replacement of the equipment. In cases where such co-operation is a real burden to the user, the fees may be remitted by special arrangement.

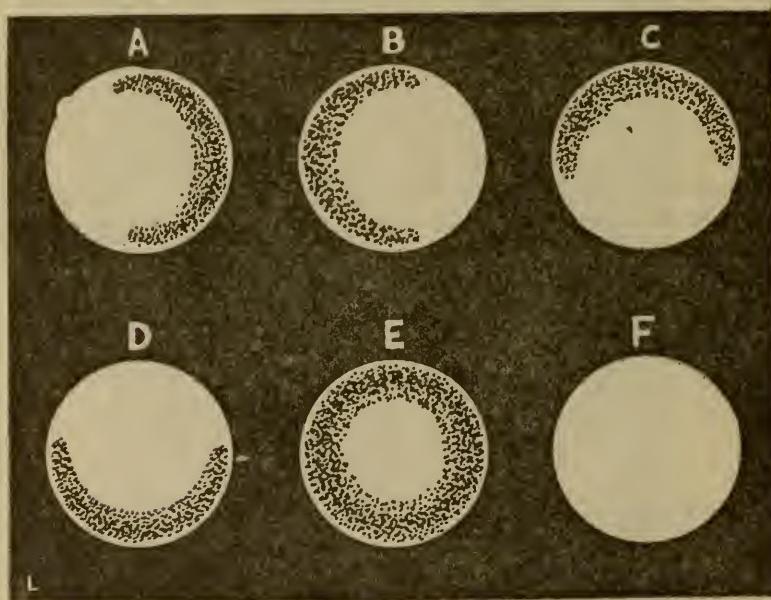
### Lantern Equipment

The Visual Instruction Division lends motion picture films, lantern slide sets, (including typewritten descriptive material from which lecture can be prepared) lanterns, (in cases where schools are not yet equipped with lanterns) and mounted reproductions of paintings by representative artists. The Division supplies either gas lanterns for use with auto or motor cycle (Prest-O-Lite) tanks, or electric lanterns for use on the usual city or power line circuits, that is, 110 volts.

Schools are urged to buy their own lanterns, as transportation

charges will soon amount to the cost of a good lantern. The operator then knows thoroughly how to operate the particular lantern, which sometimes can be kept set up and in focus until used again in the same room or auditorium. In any event it is always advisable to set up the apparatus, get the machine focussed and all arrangements made several hours before the time set for actual use.

Curtains also will have to be secured by the user. An ordinary sheet stretched without wrinkles on the wall or on a light wooden frame will serve practically as well as any curtain we could ship. In places where the curtain is left in position, a coat of white-wash will improve its effectiveness. Another method is to use a large white window shade, which can be rolled up and down as needed.



#### *The Proper Light Effect on the Screen*

In adjusting the lantern, before placing a slide in the holder, see that the light on the screen is perfectly uniform, as shown in (F) in the illustration. If the screen appears as shown in

(A), (B), (C), and so on, the source of light is not properly adjusted in relation to the condensing lenses and needs to be moved farther toward the left (A) or toward the right (B) up or down (C, D). If the screen appears as in (E), the source of light is either too far or too close to the condensing lenses. When once adjusted, the source, Mazda lamp, carbon arc, or gas jet, should be clamped permanently in place.

### *Cooperative Lantern Buying*

No school in the present day should be without projection equipment. Every small school should own a stereopticon and larger ones should possess motion picture equipment which accommodates both slides and films. To the end of assisting schools in buying projection equipment, the Department has investigated the merits of the products of several manufacturers and is in a position to recommend equipment to be purchased. In addition, a special discount has been arranged for schools buying equipment through this Department. Catalogues of approved companies and the special discounts offered can be secured by inquiry through this Department. Lanterns which are ordered through this Department are shipped direct to the school. The cost of lanterns varies from \$25 to \$60.

### **Motion Picture Equipment**

In motion picture equipment the Department recommends the "De Vry," costing about \$200, where a portable machine is desired, or the "Zenith," costing about \$275, where portability is not a dominant factor. The latter is a semi-portable model. Descriptive material will be sent on request.

*Complete Equipment*

This illustration shows the complete projection equipment: Argon lantern, operated by electricity, together with slide-case and slides.

**Conditions Under Which Slides are Lent**

Any school, club, church, or any responsible organization may, by observing the following regulations, obtain material from this Department.

1. The use must be free to the people of the community, unless the money is to be used to purchase a lantern or slides, to pay the service fee or transportation charges, or for some definite school purpose.
2. Transportation both ways is to be paid by the borrower.
3. Repair and breakage of slides and lanterns while the equipment is in the borrower's possession is to be borne by the borrower.
4. Slides and lanterns are lent for a period of five days. All schedules are made up on this basis. If one person keeps the slides overtime, someone else will be disappointed. Special arrangements can be made with the Department for an extension of time when desired.

5. Do not change the numbering on the slides. If you find it necessary to rearrange the slides for your lectures, kindly put them in proper order before returning.

6. *Fill out the Report Blank furnished for this purpose.* To save trouble, put the Report Blank, properly filled out, in the box when returning the slides. If the slides are shipped by parcel post, the Report Card must be sent back in a separate envelope as first-class matter.

It is necessary for the Division to make reports, including the number of people reached by the service. For this reason, the report *must be returned*, however small the attendance.

7. Any violation of these conditions subjects the user to removal from our service list.

### **Prompt Shipments**

Patrons are urged to ship slides immediately after they have used them. Very often, one user disappoints another by not getting the slides out on the first train. This is very embarrassing, especially when the program has been announced and the audience assembles and there are no slides to show. Under the present conditions postal and express shipments are often delayed. Help the Department overcome these conditions as far as possible by making your shipments promptly. Return all slides at once to the University unless you have received other positive shipping instructions.

### **Circuits**

In using the regular slide service, schools are urged to form circuits of neighboring schools, so that the slides may reach as many people as possible before being returned to the University. Slides may be sent from school to school until the circuit has been completed, thus reducing the express or parcel post charges and increasing the effectiveness of the service.

Information as to state circuits organized by this office will be mailed when prepared.

**Programs**

A number of schools and organizations arrange for definite programs of slide sets or films running through several months or through a school session. By this arrangement the borrowers are more apt to secure the exact sets desired, as we can reserve sets requested ahead of time. For instance, Mr. C. A. Bennick of Oakhurst arranged for the following program last session:

- March 17: Set 2, "Rural School Improvement in Texas."
- March 17: Film 21, "Ford Factory."
- March 24: Set 45, "Forest Conservation and Erosion."
- March 31: Set 44, "Volcanoes and Earthquakes."
- April 7: Set 25, "Bird Life."
- April 14: Set A10, "Trap the Fly."
- April 21: Set 18, "Tour of the United States."

**PICTURES***Announcement of Art Exhibition Circuit Service for  
Public Schools*

"The Houston Art League Collection of Prints" will be sent out on a circuit of thirty-six schools, beginning January 1, 1920. This collection, which was recently presented to the Division of Visual Instruction of the University Extension Department by the Houston Art League, consists of thirty-five beautifully colored copies of some of the best paintings in the Chicago Art Institute. Most of the prints are 8"x12", mounted on neutral toned card-board 14"x19" and are arranged in groups according to the content of the picture. Full instructions for hanging the exhibit, including burlap background, hooks, etc., will accompany the pictures. A typewritten suggestive outline also accompanies the pictures and a description is found on the back of each mounting card. This enables any teacher or other person, whether having art training or not, to properly handle the exhibit.

It is required that the exhibit be held under the auspices of a school or some other responsible organization which can give sufficient guaranty that the material will be properly used and

cared for. The variety and interest of subjects, the harmonious colors, and the rank of the artists represented, make these pictures especially suitable for study and for exhibition purposes.

You can secure this collection of prints for an exhibition in your school if you are willing to meet the simple regulations governing its use. There will be no charge for this service. Those to whom the exhibit is lent must agree to prepay the express or parcel post charges to the next town on the circuit. This charge, including the packing, will probably not exceed one dollar.

The exhibit will probably pass through your town. If you want to be included in the circuit, file your application at once, as the first thirty-six schools applying will be placed on this circuit.

#### Fees

Material circulated through this Department is either purchased and owned by the University or is lent to us for circulation. Fees are charged only for the upkeep and replacement of material used. In addition to ordinary deterioration, it is necessary that films be inspected by a specialist each time a reel is returned from a user, in order to repair any small breaks in the edges of the film that might cause serious trouble if used again without inspection. Slides also require constant attention. Broken slides should be paid for by those responsible. To assist in the upkeep of material and replacement, the scale of fees for lantern slide sets and motion picture films is as follows:

#### *Motion Picture Films*

Annual Service .....	\$15.00
Individual Shipments .....	3.00

#### *Lantern Slide Sets*

Annual Service .....	\$ 5.00
Individual Shipments .....	1.00

When the annual service fee is paid the number of shipments per year is unlimited. In a city school system each ward school

taking advantage of the service shall pay the fee. There is no objection on the part of the Department to schools charging a small admission fee to raise the amount of the service fee, for the purchase of projection equipment, or for paying transportation charges on material.

Where materials are used in furthering philanthropic movements, or whenever the fee is a real burden to the user (as in the case, it might be, of the smaller rural schools), arrangements can be made for remission of fees.

#### Made-to-Order Slides

Patrons of Visual Instruction Service often need a special slide or two for class work or other purposes; for instance, the physics instructor has difficulty in making clear to the class the working of certain machines, or the instructor in literature desires to illustrate a sketch or view of the Elizabethan stage. The Department is equipped with an up-to-date laboratory for the making of slide sets for circulation among schools and clubs of Texas. Since patrons in the past have had difficulty in procuring made to order material from commercial laboratories, we offer to make up limited numbers of lantern slides provided the user furnishes the diagrams or pictures to be used. Slides can be made of pictures from books without damage to same, and can be hand colored when desired.

#### List of Lantern Slide Sets Available for Service

(Sets marked with an asterisk (\*) have no lecture notes)

##### *Art*

Set Number	Title
12	Figure Painting
14	Architecture
15	Sculpture
54	The Christ Child and the Madonna
91	All Are Soldiers in a Democracy
112	Children's Pictures for Children

*Classical*

Set Number	Title
35	Rome (for beginners in Latin)
36	Ancient Rome (for Latin and history classes)
37	Greek and Roman Mythology

*Education*

1	The University of Texas
2	Rural School Improvement in Texas
3	Construction and Hygiene of School Buildings
4	The Improvement of School Grounds
5	The School House as a Social Center*
6	Socializing Activities of the School
7	Consolidation of Rural Schools
8	Rural School Buildings and Grounds
9	Recreation: Plays and Games
10	The New Era in Country Life and Country Schools
A11	The Great Forward Movement in Education
84	The Prevention of Blindness
85	A Visit to the Texas School for the Blind

*Health*

A10	Trap the Fly
28	Insects and Diseases
29	The Cigarette
30	Malaria
31	Typhoid Fever
38	Germ Diseases and Health
39	Typhoid Fly Problem and Civic Campaigns
52	Your Mouth and Your Health
95	Tuberculosis
122	Housing (Good and Bad Housing Conditions)
123	Municipal Sanitation
124	City Planning

*History and Patriotism*

33	George Washington
91	All Are Soldiers in a Democracy
92	Our National Symbols
101	Story of the Flag
102	The Bell and the Flag
103	America and Destiny (See also Classical)

*Industries*

Set Number	Title
201	Phosphate
202	Rubber
203	Salt
204	Copper
205	Anthracite
206	Cotton Manufacturing
207	Iron Ore Mining
208	Iron Ore Transportation
209	Pig Iron
210	Steel
211	Lumber
212	Paper
213	Gold Mining
214	American Silk
215	Japan Silk
216	Metal Money
217	Ice Harvest

*Nature, Physical Geography, Science*

A9	Home Economies
A12	Home Canning by the Cold Pack Method
23a	Physical Geography (Part One)
23b	Physical Geography (Part Two)
25	Bird Life
26	Forms and Colors of Flowers in Their Relation to Insect Visits
27	Burbank's Plant Creation
44	Volcanoes and Earthquakes
45	Forest Conservation and Erosion
83	Airplanes and How They Are Made

*Travel*

16	Panama Pacific Exposition
17	Scenic Wonders of Our West
18	A Tour of the United States
19	Around the World in Eighty Minutes
20a	The Panama Canal
20b	The Panama Canal
21	Palestine and Syria
22	Niagara Falls
24	The Grand Canyon of the Colorado
32	The Awakening Orient

Set Number	Title
34	Egypt, the Land of Pharoahs
40	Babylonia and Assyria
41	The Holy Land
42	Japan
43	Children in Different Lands
93	Chile
94	Jamaica
105	Grandeur of the Rockies
106	South America
107	Mexico
108	Central America
109	Alaska
110	India

#### *War Slide Sets*

61	Destruction of Famous Cathedrals and Churches by the Germans
65	With Pershing in France
68	Our Navy at Work
69	Belgium, the Downtrodden
70	French Soldiers
75	Making the American Army
76	Training Our Army in France
77	Building a Bridge of Ships to Pershing
79	Airplanes and How They Helped to Win the War

#### *War Slide Sets With Lectures By Members of University Faculty*

49	Texas Food Products
64	Y. M. C. A. as a Builder of Morale on the Battle Line
66	Y. M. C. A. as a Builder of Morale in the Can- tonments
88	What Our Boys Saw in France

#### *Red Cross*

55	America's Opportunity
56	Junior Red Cross
57	Behind the Lines
58	Mercy in War
59	Women in War

*Miscellaneous*

Set Number	Title
53	Home Beautification* (Exterior and interior)
124	City Planning
131	Social and Economic Returns from Good Roads
132	Maintenance of Dirt and Gravel Roads
133	The Selection of the Type of Road Service

*Motion Picture Film Service*

The Bureau of Visual Instruction can furnish numerous films on industrial, educational, and travel subjects. Besides those films that belong to this Department, many agencies of public instruction and community motion picture bureaus have lent us many subjects. A film circuit is being arranged and applications for films will be accepted at any time. Upon receipt of application and payment of fee (*All industrial films lent us by the numerous agencies are not subject to the fee*), the applicant will be placed on our circuit list and will receive films as they come to this Department, not only the "short-time" material, but also all new material that is purchased or received.

*Suggested List of Motion Picture Films Obtainable*

Set Number	Title	Number of reels
1	America's Answer	5
2	American Expeditionary Forces	36
3	America's Red Cross	1
4	Building Highways	1
5	Child Welfare (U. of T. Extension Service)	1
6	Concrete on the Farm	1
7	Condensed Milk	3
8	Football Match (Argentina Republic)	1
9	Making Textbooks (Ginn & Company)	1
10	Holding On (Print G)	1
11	Holding On (Print V)	1
12	Larkin Factories	1
13	Our Bridge of Ships	3
14	Pershing's Crusaders	7
15	Price of Peace (Print CC)	5
16	1917 Recruits	1
17	Soldiers of the Sea	1
18	Spirit of 1918	1
19	Training a Soldier (Print S) Parts 4, 5, 6, 9, 15, 19, 20, 21, 22, 23, 37, 38	12

Set Number	Title	Number of reels
20	Training a Soldier (Print W) Parts 2a, 2b, 3a, 3b, 8a, 8b, 10a, 10b	8
21	Turbine Grader	1
22	War Review (Print GGG)	1
23	War Review (Miscellaneous)	3
24	War Review (Print M) Parts 25-31 (inclusive)	7
25	War Review (Print AA) Parts 1-20	20
26	Building the Roads of a Military Cantonment	1
27	From Coal Mine to Corn Field	1
28	The Sugar Industry	3
29	Muscle Shoals Plant	2
30	Icy Hot Bottle	1
31	How to Operate a Multigraph	2
32	Evolution of a Stenographer	2
33	Cincinnati As Seen by the Camera	1
34	Box of Candy	1
35	A Trip up Mount Lowe	1
36	The Salmon Industry	1
37	A Trip to Richmond, Virginia	1
38	Winchester Arms	1
39	Nuts That Nourish	2
40	The Rubber Industry	3
41	The Making of a Fountain Pen	2
42	The Mutton Industry	1
43	Bread, the Staff of Life	3
44	The Story of a Grain of Wheat	1
45	A Trip to the City of Baltimore	1
46	A Trip to the City of Norfolk	1
47	From Cow to Consumer: Dairying	2
48	Manufacturing and Circulation of a Magazine	4
49	The Making of a Watch Chain	1
50	Treasures of the Incas	1

Note: Bulletin No. 1730, "Visual Instruction through Lantern Slides and Motion Pictures" gives additional information about lantern slides and the operation of a stereopticon. Sent on request.

Address all inquiries to:

Division of Visual Instruction,  
University of Texas,  
Austin, Texas.

### **Application Blank for Lantern Slides**

From University of Texas, Department of Extension.

Slides wanted:                      Date Wanted.....

(First choice)                      Will return .....

.....

.....

(Second choice)

.....

Shall we ship by Express or Pareel Post?.....

Shipping address .....

Are we to send a lantern?.....

Is gas or electricity to be used?.....

Remarks: .....

Signature .....

Institution ..... Address .....

THE UNIVERSITY OF TEXAS  
DEPARTMENT OF EXTENSION

The Extension Department of the University of Texas, established in 1909, aims to extend the benefits of the University to the citizens of Texas who cannot, for one reason or another, attend the University as resident students. The work of the Department is conducted under the following four divisions:—

1. THE EXTENSION TEACHING DIVISION offers about 300 courses by correspondence, many of such courses counting as college credits. Forty-five group-study courses are also offered that are specially adapted to the needs of women's clubs and similar organizations. Address inquiries to the Registrar, Division of Extension Teaching.

2. THE PACKAGE LOAN LIBRARY DIVISION lends material over 4,000 subjects in the fields of art, education, politics, government, sociology, literature, biography, and questions of the day to citizens of Texas, upon request. Material on new subjects is constantly being added. The material is loaned upon application for a period of two weeks, the only charge being that the borrower pays the postage both ways. Address Package Loan Library, Department of Extension.

3. THE DIVISION OF VISUAL INSTRUCTION lends lantern slides and motion picture films both to individuals, and also to schools and other organizations under the circuit plan. The Division has 168 sets of lantern slides and 123 motion picture reels at the present time. A moderate fee is charged for this service to assist in the upkeep and replacing of material. Correspondence is invited. Address Division of Visual Instruction.

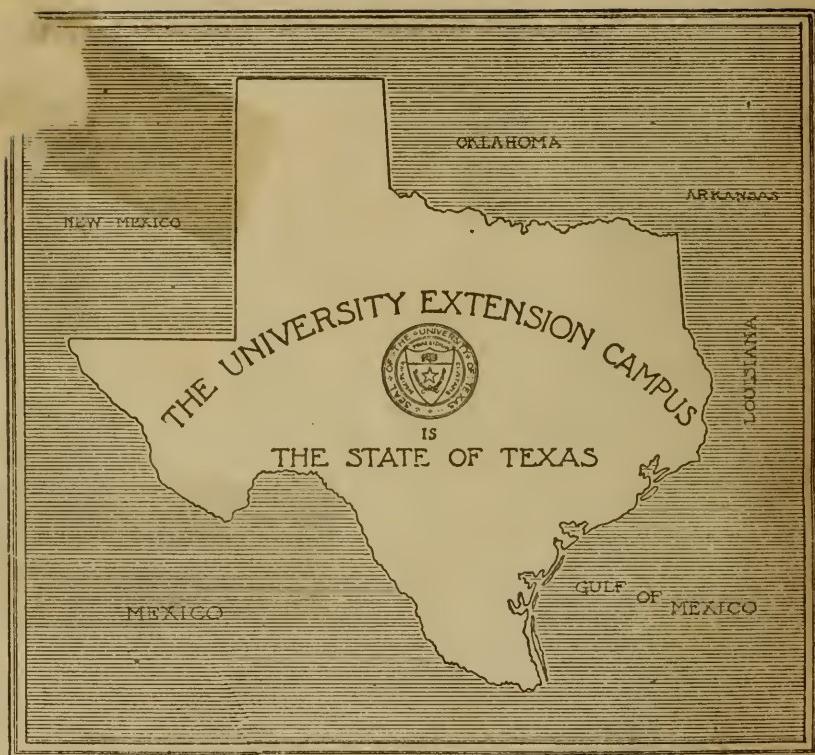
4. THE SCHOOL AND COMMUNITY DIVISION includes the State organization of public schools known as the University Interscholastic League, designed to promote healthful school activities outside of the regular curriculum. The League conducts local, county, district and, State contests in debating, extempore speaking, declamation, essay-writing, spelling, and athletics. The membership fee in the League is proportioned to the size of the school. Nearly 3,000 schools joined this organization last year. *Every School in Texas* should become a member and receive the benefits to be derived therefrom.

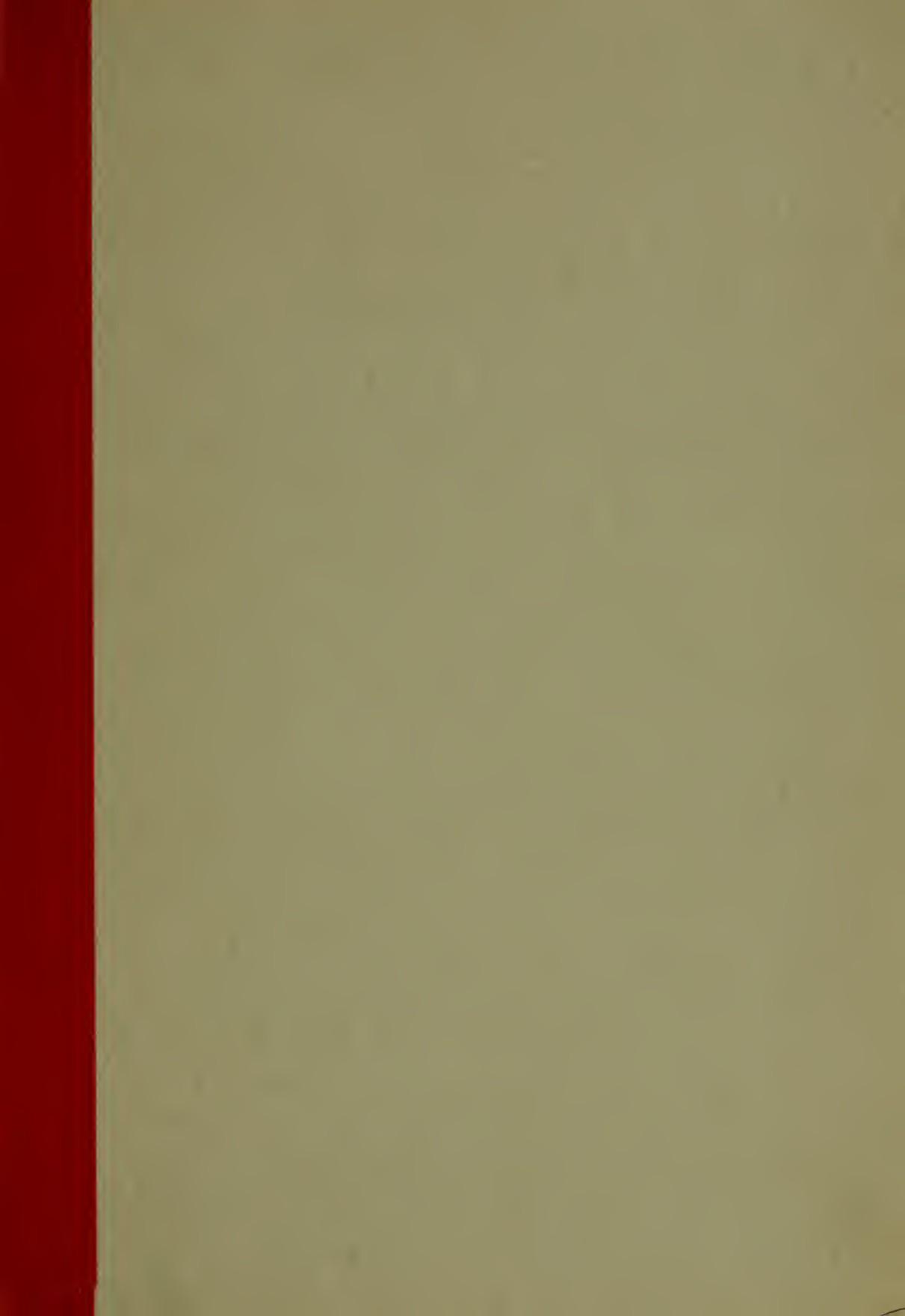
This Division also conducts community and county educational campaigns particularly for the benefit of the rural schools. Such campaigns, usually arranged in co-operation with the county superintendent of schools, are conducted by specialists in health, physical, and rural education. Correspondence regarding this service and the Interscholastic League is invited.

Various bulletins relating to the Extension service have been prepared and will be mailed free to any citizen of Texas, upon request. Write for a list of free bulletins.

"THE UNIVERSITY EXTENSION CAMPUS IS THE STATE OF TEXAS." If we can serve you in *any* way, do not hesitate to write us. Address general inquiries to

E. D. SHURTER, Director,  
University Extension Department,  
Austin, Texas.





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